

## CLAIMS

- 1 1. A system for determining and displaying icons representing text files,  
2 comprising:  
3  
4 a content extractor for determining the content of all or parts of a text file by  
5 examining words in the file;  
6  
7 a means for associating the content with an icon;  
8  
9 a selector for selecting an icon to represent the text file or portion of a file on the basis  
10 of the determined content of the text file; and  
11  
12 a display for displaying the selected icons to represent the text file.
- 1 2. A system according to Claim 1, wherein the selector includes means for  
2 selecting the closest one of a group of available icons to represent the text file.
- 1 3. A system according to Claim 1, wherein the content extractor includes means  
2 for determining several topic icons for the text file.
- 1 4. A system according to Claim 3, wherein the topic icons form a composite icon  
2 associated with a different parts of the text file.
- 1 5. A system according to Claim 3, wherein the several icons are sensed by  
2 different senses.
- 1 6. A system according to Claim 1, wherein the icons facilitate use of a computer  
2 by people with various disabilities.

1 7. A system for representing contents of computer files via icons, the system  
 2 comprising:  
 3  
 4 a computer memory including a group of directories with lists of files;  
 5  
 6 a semantic content extractor for extracting information and content from the files; and  
 7  
 8 a module for creating icons representing the files on the basis of the information and  
 9 content extracted by the semantic content extractor.

1 8. A system according to Claim 7, wherein the semantic content extractor  
 2 includes:  
 3  
 4 a module that associates with a text file a language model, and word, key words and  
 5 key phrases counts;  
 6  
 7 a topic identifier that uses the language model and counts to identify a topic; and  
 8  
 9 a module that partitions a text in a file by topic count.

1 9. A system according to Claim 8, wherein the topic identifier uses likelihood  
 2 ratio to partition texts in parts by topics; likelihood in this ratio are defined by using  
 3 probabilities of words from language models of the text in a file and language models  
 4 for various topics that are stored in the database.

1 10. A method for creating a composite icon to allow greater access to computer  
 2 files, comprising the steps of:  
 3  
 4 using a file topic identification to perform segmentation and topic classification; and  
 5

6 using a file topic divider to divide the files into parts using segmentation and topic  
7 classification from the file topic identification.

1 11. An icon creator for creating an icon representing a file, comprising:  
2  
3 a semantic content extractor for identifying the importance and significance of topics  
4 associated with the file; and  
5  
6 a matcher to create a match of data and images to create an icon using a database of  
7 images and a database of icons; and  
8  
9 wherein each icon has an index attachment, which opens directly to the file.

1 12. An icon creator according to Claim 11, wherein a blind person can use a sound  
2 icon using the database of sound icons; this would enable the blind user to use their  
3 sense of hearing to choose the file they wish to open.

1 13. An icon creator according to Claim 11, further comprising means to allow a  
2 person with a reading disability to use the icon system, including a group of files that  
3 are formed into an icon attachment; the user then chooses an icon, using the pictures  
4 or sounds and the user can then use a speech synthesizer can listen to a file.

1 14. An icon creator according to Claim 11, wherein composite icons contain  
2 multiple topics such as cars and travel, and dealerships, the larger part of the file  
3 shows cars, the smaller part of the file shows travel; the middle sized part of the file  
4 shows dealerships; and further comprising means to contain an index which lists  
5 information on cars or building, means to show where the information on cars is placed  
6 in the file; and wherein, using a fraction method, the files can be broken down.

1 15. A method for creating icons, comprising:  
2

3 generating a list of files;  
4  
5 reading the content of each file;  
6  
7 attaching topics to each file;  
8  
9 generating icons for the files;  
10  
11 if several topics, creating a composite icon containing many topics;  
12  
13 creating an index of topics;  
14  
15 printing a list of icons near file names; and  
16  
17 creating a list of icons to list files.

1 16. A method of determining and displaying icons representing files containing  
2 text, the method comprising the steps of:  
3  
4 determining the content of a file by examining words in the file;  
5  
6 searching a database of icons;  
7  
8 on the basis of the determined content of the file, selecting one of the icons in the  
9 database to represent the file; and  
10  
11 displaying the selected icon to represent the file.

1 17. A method according to Claim 16, wherein in the database, each icon is  
2 associated with words, and wherein:  
3

4 the determining step includes the sep of using a semantic content extractor to identify  
5 the importance and significance of topics associated with the file; and  
6  
7 the selecting step includes the step of comparing said topics with the words in the  
8 database to select one of the icons to represent the file.

1 18. A program storage device readable by machine, tangibly embodying a program  
2 of instructions executable by the machine to perform method steps for determining  
3 and displaying icons representing files containing text, said method steps comprising:  
4  
5 determining the content of a file by examining words in the file;  
6  
7 searching a database of icons;  
8  
9 on the basis of the determined content of the file, selecting one of the icons in the  
10 database to represent the file; and  
11  
12 displaying the selected icon to represent the file.

1 19. A program storage device according to Claim 18, wherein in the database, each  
2 icon is associated with words, and wherein:  
3  
4 the determining step includes the sep of using a semantic content extractor to identify  
5 the importance and significance of topics associated with the file; and  
6  
7 the selecting step includes the step of comparing said topics with the words in the  
8 database to select one of the icons to represent the file.

1 20. The system in claim 1, where the icons contain advertisements, which may be  
2 hyperlinks.

1 21. The system in claim 20 where users pay less for the system if ads are included.

1 22. The system in claim 20 where advertiser pays manufacturer or seller of system.

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